

VIRGINIA STATE UNIVERSITY

LIFE SAFETY MECHANICAL REPLACEMENT PROJECT



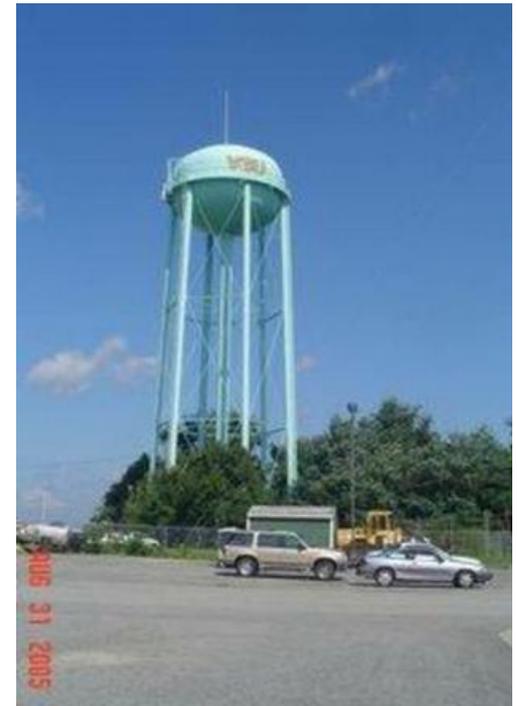


VSU EXISTING CONDITIONS

- VSU water tank and lines are a private stand alone system with one water feed
- Tank constructed in 1965
- Pumping capacity 500 gal/minute – water storage capacity 200,000 gallons (domestic & fire protection)
- Peak firefighting requirement – 4,750 gals/min for 4 hours = 1,140,000 gallons
- Peak Day domestic requirement – 259,556 gallons



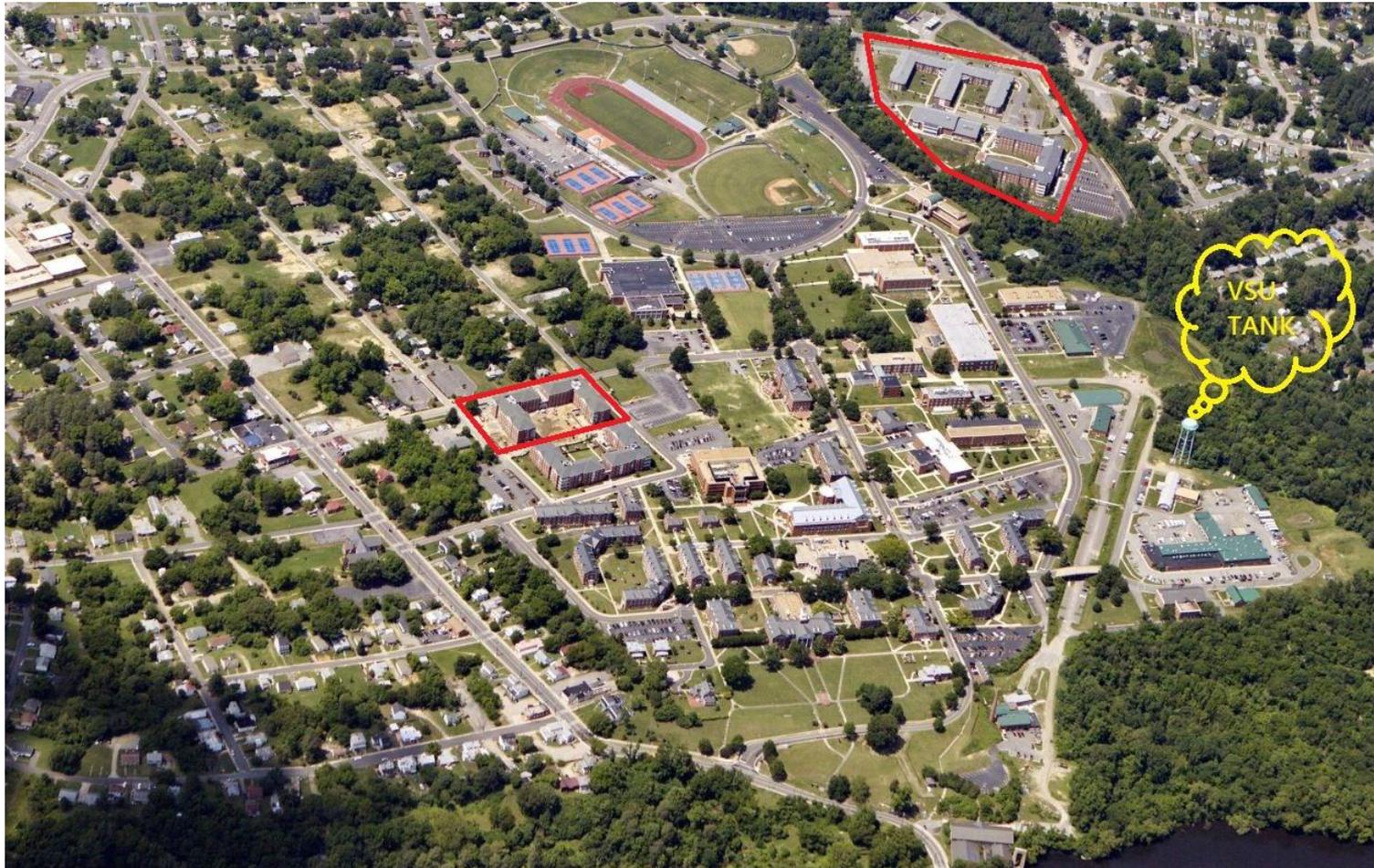
VSU Tank





VSU EXISTING CONDITIONS

- Those buildings that required waterline extensions and are already connected to Chesterfield's system – outlined in red below – will not need any future improvements.

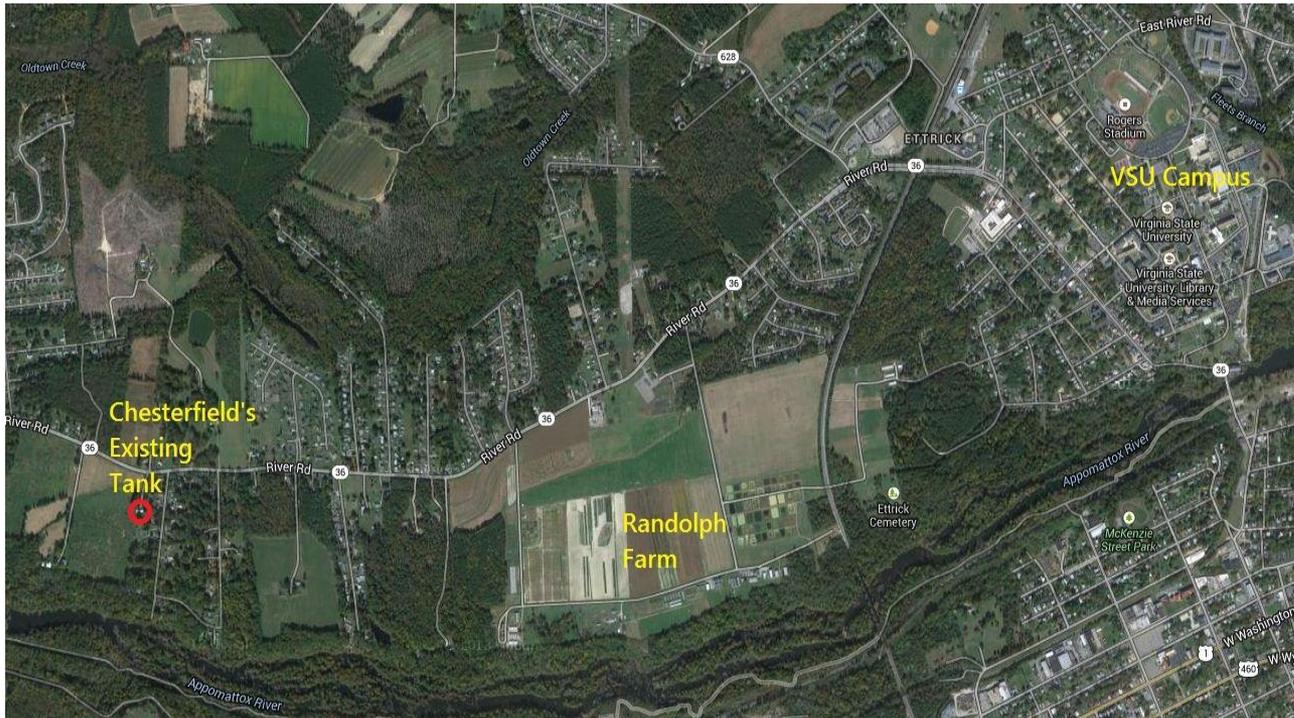




CHESTERFIELD COUNTY EXISTING CONDITIONS

- Existing Chesterfield County tank located about 2 miles west of VSU's Randolph Farm
- Storage Capacity 150,000 gallons
- Pumping Capacity 750 gals/min – has several connections from other tanks for backup supply to supplement pumps
- Currently serving approximately 3000 residential accounts and 60 business accounts

Matoaca Tank





LIFE SAFETY MECHANICAL REPLACEMENT PROJECT DEVELOPMENT TIMELINE

- VFA Facilities Assessment – 1/11 FCI identified as 109.3% (Target is < .10)
- VSU engaged Timmons Group for Water and Sewer Improvements Study – 3/11
- Budget Request for approx. \$41.5 M for renewals and replacement of VSU infrastructure as a University system – 6/11
- 2012 Session Introduced HB30 Item C-37, G – Proposed an overlay of funding into Maintenance Reserve Appropriation for *Lifesafety Mechanical Renewal and Replacement* project (proposed central appropriation of \$7,454,815 FY13 and \$11,719,988 FY14)
- Maintenance Reserve Appropriation overlay was not enacted



LIFE SAFETY MECHANICAL REPLACEMENT PROJECT DEVELOPMENT TIMELINE

- VSU engaged Austin-Brockenbrough for a Combined VSU/Chesterfield County Water and Wastewater Study – 5/12
- MOU for Water and Wastewater Service between VSU and Chesterfield executed – 5/12
- New budget request for \$15,236,000 for Combined VSU/Chesterfield County Project to be constructed in 5 phases – 9/12
- Budget Amendment submitted requesting \$14,935,940 GF/ \$300,000 NGF – 12/12
- 2013 Session – Chapter 806, Item C-39.40 approves “Water Tank and Campus Water Distribution Piping” – 12/12
- ★ **ENTIRE PROJECT ASSUMED TO HAVE BEEN APPROVED IN CHAPTER 806**
- University advised that only Phase 1 & Phase 2 (New tank and waterline extension to MPC - approximately \$3.5M) budget; project remainder to be submitted as an additional budget request – 8/13



LIFE SAFETY MECHANICAL REPLACEMENT PROJECT DEVELOPMENT TIMELINE

- New Budget Request for the remaining project funding for \$11,736,000 submitted - 8/13
- Funding recommendation for 3 Phases or \$7,351,357 received – 11/13
- CO 2 Form for 3 phases submitted – 11/13



Proposed Project – All Phases

Phase 3 – Extend waterline from Multipurpose Center to the master meter connection (demolition of the VSU tank). At this point, all campus buildings are supplied by Chesterfield County tank. Construction Interval - 12 months

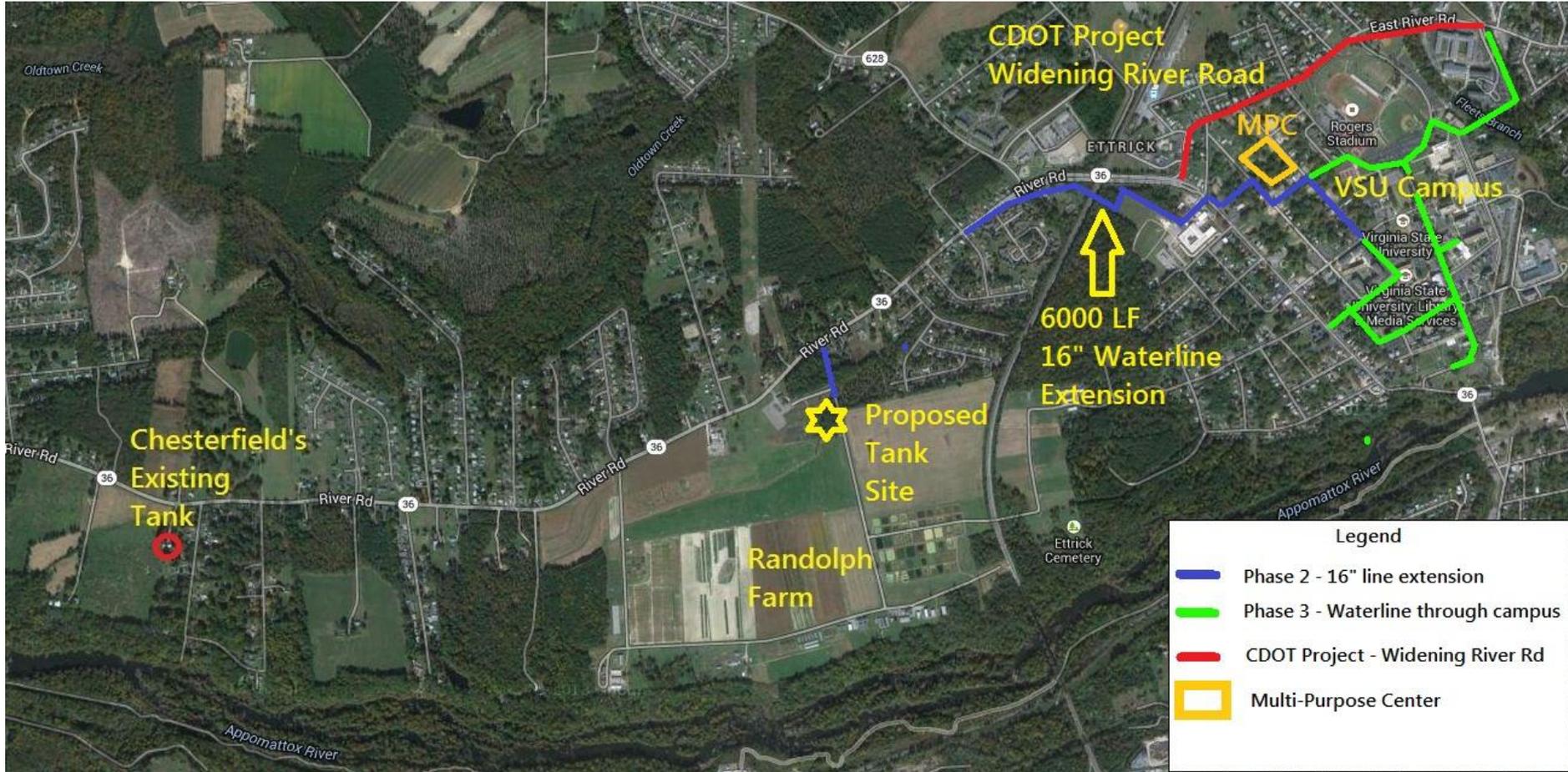
Phase 4 – Age and Condition replacement of secondary waterlines to individual buildings - Estimated 12 months

Phase 5 - Age and Condition replacement of secondary sewer lines to individual buildings - Most efficient to replace wastewater lines when installing waterlines in the same vicinity.





Overview





Mutual Benefits

- VSU and Chesterfield County provided increased water storage
- VSU and Chesterfield County reduce their tank replacement costs by 50% - **\$2,460,000**
- Meets all the domestic and fire protection needs of VSU and Chesterfield County's Ettrick Community





Mutual Benefits

- VSU avoids Operation and Maintenance cost for the tank and pump station. Average O/M costs approximately \$60,000/yr.
- As secondary lines are replaced on campus, they are designed and constructed to Chesterfield County standards, and will be accepted for maintenance as part of county system. (Current cost for repairing leaks and replacing lines– Approx \$300,000 per year.)
- Increased fire flows available - the need for new and replacement fire pumps decreased.





Mutual Benefits

Conclusion:

Fire Life & Safety is the primary force behind rehabilitating the VSU water system. This is a great opportunity for VSU and Chesterfield County to form a partnership. It will address the issue of fire protection for the Multipurpose Center while also rehabilitating the water system on the campus with new lines. When complete, Chesterfield County will maintain the tank, pumping station and infrastructure on campus.